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IMAGES IN CARDIOLOGY

The Eternal Dilemma Between Supraventricular and Ventricular Tachycardias in a Patient With Brugada Syndrome

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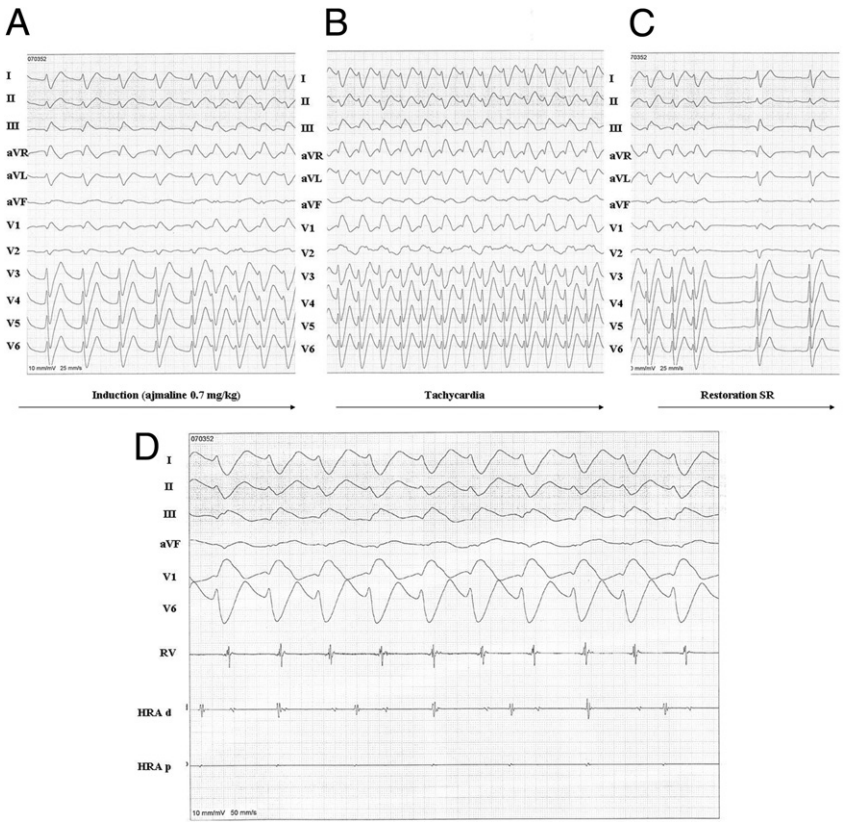

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The image shows the result of an ajmaline test in a 42-year-old patient with a diagnosis of Brugada syndrome. **A** shows the transition from sinus rhythm to a right bundle branch block tachycardia with a heart rate of 140 beats/min, with a wide QRS complex (220 ms) and a right axis deviation (as depicted in **B**). **C** displays spontaneous restoration of sinus rhythm. At first glance, the similarity of the QRS morphology during sinus rhythm and during tachycardia and the QRS alternans particularly evident in the right precordial leads made the differential diagnosis between a supraventricular and ventricular tachycardia challenging. **D** gives the solution to the enigma, displaying a clear atrioventricular dissociation, indicating that the tachycardia is ventricular in origin. The proposed arrhythmia mechanism is triggered activity arising from the left anterior fascicle, determined by the capability of ajmaline to induce early afterdepolarizations in the Purkinje fibers. HRA d = distal high right atrium; HRA p = proximal high right atrium; RV = right ventricle.